

**Commonwealth of Kentucky  
Division for Air Quality**

**PERMIT APPLICATION SUMMARY FORM**

Completed by: Mark Labhart

GENERAL INFORMATION:

Name:	Audubon Metals, LLC
Address:	Same as above
Date application received:	6/16/2008
SIC Code/SIC description:	3341, Secondary Smelting and Refining of Nonferrous Metals (aluminum)
Source ID:	21-101-00118
Source A.I. #:	1790
Activity ID:	APE20080001
Permit:	F-07-019 R1

APPLICATION TYPE/PERMIT ACTIVITY:

<input type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input checked="" type="checkbox"/> Permit modification	<input checked="" type="checkbox"/> Conditional major
__Administrative	<input type="checkbox"/> Title V
<u>X</u> Minor	<input checked="" type="checkbox"/> Synthetic minor
__Significant	<input checked="" type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input checked="" type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☒ Source applied for federally enforceable emissions cap
- ☐ Source provided terms for alternative operating scenarios
- ☒ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☒ Certified by responsible official
- ☐ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

**EMISSIONS SUMMARY:****F-07-019 R1**

<b>Pollutant</b>	<b>2007 Actual Emissions (TPY)</b>	<b>Potential Emissions (TPY)</b>
PM	7.96	90.0 *
PM10	5.05	90.0 *
CO	20.9	40.25
NO <sub>x</sub>	24.92	47.92
SO <sub>2</sub>	0.15	0.29
VOC	2.05	3.81
Cl <sub>2</sub>	0.0	1.0
HCl	2.73	5.43
D/F (TEQ)	8.0E-07	See Secondary Aluminum MACT
HF	5.45	7.52 **

\* Conditional Major / Synthetic Minor Limits

\*\* Existing permit limitation

**F-07-019**

<b>Pollutant</b>	<b>2006 Actual Emissions (TPY)</b>	<b>Potential Emissions (TPY)</b>
PM	69.74	90.0 *
PM10	66.51	90.0 *
CO	19.7	40.25
NO <sub>x</sub>	23.45	47.92
SO <sub>2</sub>	0.14	0.29
VOC	4.39	3.29
Cl <sub>2</sub>	0.0	1.0
HCl	2.8	3.74
D/F (TEQ)	7.0E-07	See Secondary Aluminum MACT
HF	4.38	7.52

\* Conditional Major / Synthetic Minor Limits

**SOURCE PROCESS DESCRIPTION:**

Audubon Metals, LLC (hereby referred to as Audubon) receives non-ferrous metals from automobile shredding plant and produces high quality aluminum ingots for use in the automotive die-casting industry. The metal is a mixture of aluminum, zinc, copper, magnesium, and stainless steel. The material passes through five separation stations and is separated into steel, aluminum/magnesium mix, heavies, and high-quality aluminum categories. The high quality aluminum is then melted down in a smelter/converter furnace and cast into aluminum ingots. The source has requested an additional smelter/converter furnace as a standby in the event that either furnace #1 or #2 was down.

In March 2006, Audubon submitted an application for a significant revision on its permit. This application proposed the construction of a new rotary thermal dryer with hourly throughput rate of 16.45 tph of scrap aluminum to replace the existing one rated at 9.74 tph. This application also proposed that the previous combined control systems be separated. The new control devices will capture and vent the exhaust of the smelter/converter furnaces #1 through #3 (EP 3) through the new 200,000 acfm dry scrubber/baghouse system. The old control devices will be used for the rotary

thermal dryer (EP 6) with a total exhaust volume of 110,000 acfm through the current single stack. No changes were proposed in the scrap handling and other affected facilities.

**MINOR PERMIT REVISION F-07-019 R1:**

Audubon is requesting changes to their current operating limitations which restrict feed rates to the rotary thermal dryer and (3) three furnaces based on the results of recent emissions testing. Emission factors for PM and D/F have been recalculated based on the test results and the facility will remain within the existing permitted emission limits. Hourly throughput rates are now 22.85 tons/hr for the new thermal dryer and 7.95 tons/hr/furnace for each of the (3) three furnaces.

**EMISSION AND OPERATING CAPS DESCRIPTION:**

Emission caps are as follow:

Emission Point	Pollutant	Allowable	Applicable Regulation
<p>Group 1:</p> <ul style="list-style-type: none"> <li>003 Smelter/Converter Furnace #1</li> <li>004 Smelter/Converter Furnace #2</li> <li>005 Smelter/Converter Furnace #3</li> <li>006(-) Rotary Thermal Dryer</li> </ul>	<ul style="list-style-type: none"> <li>Particulate / Opacity</li> <li>HF</li> <li>D/F (TEQ)</li> </ul>	<p><u>Particulate/Opacity:</u></p> <ul style="list-style-type: none"> <li>Source-wide particulate emissions shall not exceed 98.6 tons/12-month rolling average. Self-imposed to preclude 401 KAR 52:020 – Title V permits.</li> <li>For each furnace, particulate emission allowable is 12.98 pounds/hour. For three furnaces as a group, particulate emission allowable is 45 tons/12-month rolling average. For the dryer, particulate emission allowable is 24.98 pounds/hour, 25 tons/12-month rolling average (Synthetic Minor Limit).</li> <li>For each emission point, the opacity shall not equal or exceed 20%.</li> </ul> <p><u>HF:</u></p> <ul style="list-style-type: none"> <li>Source-wide HF emissions shall not exceed 7.52 tons/12-month rolling average.</li> </ul> <p><u>D/F:</u></p> <ul style="list-style-type: none"> <li>D/F emissions shall not exceed the limits specified in the applicable regulations for the thermal chip dryer.</li> </ul>	<p><u>Particulate/Opacity:</u></p> <ul style="list-style-type: none"> <li>401 KAR 52:030 - Self-imposed to preclude 401 KAR 52:020.</li> <li>401 KAR 59:010</li> </ul> <p><u>HF:</u></p> <p>401 KAR 53:010</p> <p><u>D/F:</u></p> <p>40 CFR 63 Subpart RRR §63.1505 (c)(2)</p>
<p>Group 2:</p> <ul style="list-style-type: none"> <li>001(E0) Raw material handling – non-ferrous metal scrap</li> <li>002(E1) Ring crusher and air classifier</li> <li>007(-) Vehicular Traffic Fugitive</li> </ul>	<p>Particulate / Opacity</p>	<ul style="list-style-type: none"> <li>Particulate emission allowable is 1.14 pounds/hour, 5 tons/12-month rolling average for 001(E0), 0.34 pounds/hour, 1.5 tons/12-month rolling average for 002(E1), and 3.65 pounds/hour, 16 tons/12-month rolling average for 007(-).</li> <li>For 007(-), the opacity shall not equal or exceed 20%.</li> </ul>	<ul style="list-style-type: none"> <li>401 KAR 52:030 - Self-imposed to preclude 401 KAR 52:020.</li> <li>401 KAR 59:010</li> </ul>

Operating caps are as follow:

Emission Point	Pollutant	Operating requirement	Applicable Regulation
<p>Group 1:</p> <ul style="list-style-type: none"> <li>003 Smelter/Converter Furnace #1</li> <li>004 Smelter/Converter Furnace #2</li> <li>005 Smelter/Converter Furnace #3</li> <li>006(-) Rotary Dryer</li> </ul> <p>Group 2:</p> <ul style="list-style-type: none"> <li>001(E0) Raw material handling – non-ferrous metal scrap</li> <li>002(E1) Ring crusher and air classifier</li> </ul> <p>007(-) Vehicular Traffic Fugitive</p>	<ul style="list-style-type: none"> <li>Particulate</li> <li>HAPs</li> <li>D/F (TEQ)</li> </ul>	<p><u>Particulate:</u></p> <ul style="list-style-type: none"> <li>The permittee shall only use clean charge for three smelter/converter furnaces.</li> <li>For each furnace, the permittee shall not process more than 7.95 ton/hour of scrap aluminum and base metal, 10,100 pounds/day of flux. For each furnace, the permittee shall not process more than 164 pounds of demag chlorine gas per hour over a three hour average period. For the dryer, the permittee shall not process more than 22.85 tons/hour of scrap aluminum. The permittee shall not process at rates that will cause source-wide particulate emissions to exceed 98.6 tons/12-month rolling average. Self-imposed to preclude 401 KAR 52:020 – Title V permits.</li> <li>The permittee shall comply with applicable operating standards in 401 KAR 63:010 Section 3.</li> </ul> <p><u>D/F:</u></p> <ul style="list-style-type: none"> <li>The permittee shall comply with applicable operating requirements specified in the applicable regulation for the thermal chip dryer.</li> </ul>	<p><u>Particulate:</u></p> <ul style="list-style-type: none"> <li>401 KAR 52:030 - Self-imposed to preclude 401 KAR 52:020.</li> <li>401 KAR 63:010</li> </ul> <p><u>D/F:</u></p> <ul style="list-style-type: none"> <li>40 CFR 63 Subpart RRR §63.1506</li> </ul>

#### OPERATIONAL FLEXIBILITY:

In order to maintain the smelter/converter furnaces as clean charge only furnaces, the facility is allowed to operate the rotary thermal dryer as a “scrap dryer/delacquering kiln/decoating kiln” on an as needed basis. Under this alternative scenario, this emission point is defined as a new scrap dryer/delacquering kiln/decoating kiln pursuant to 40 CFR 63 Subpart RRR §63.1503 . Per the 40 CFR 63 Subpart RRR §63.1500 Applicability, this unit is only subject to the Subpart RRR requirements for D/F because the facility is an area source of hazardous air pollutants. The detailed requirements are in Section B: **ALTERNATE OPERATING SCENARIOS** in the revised permit.